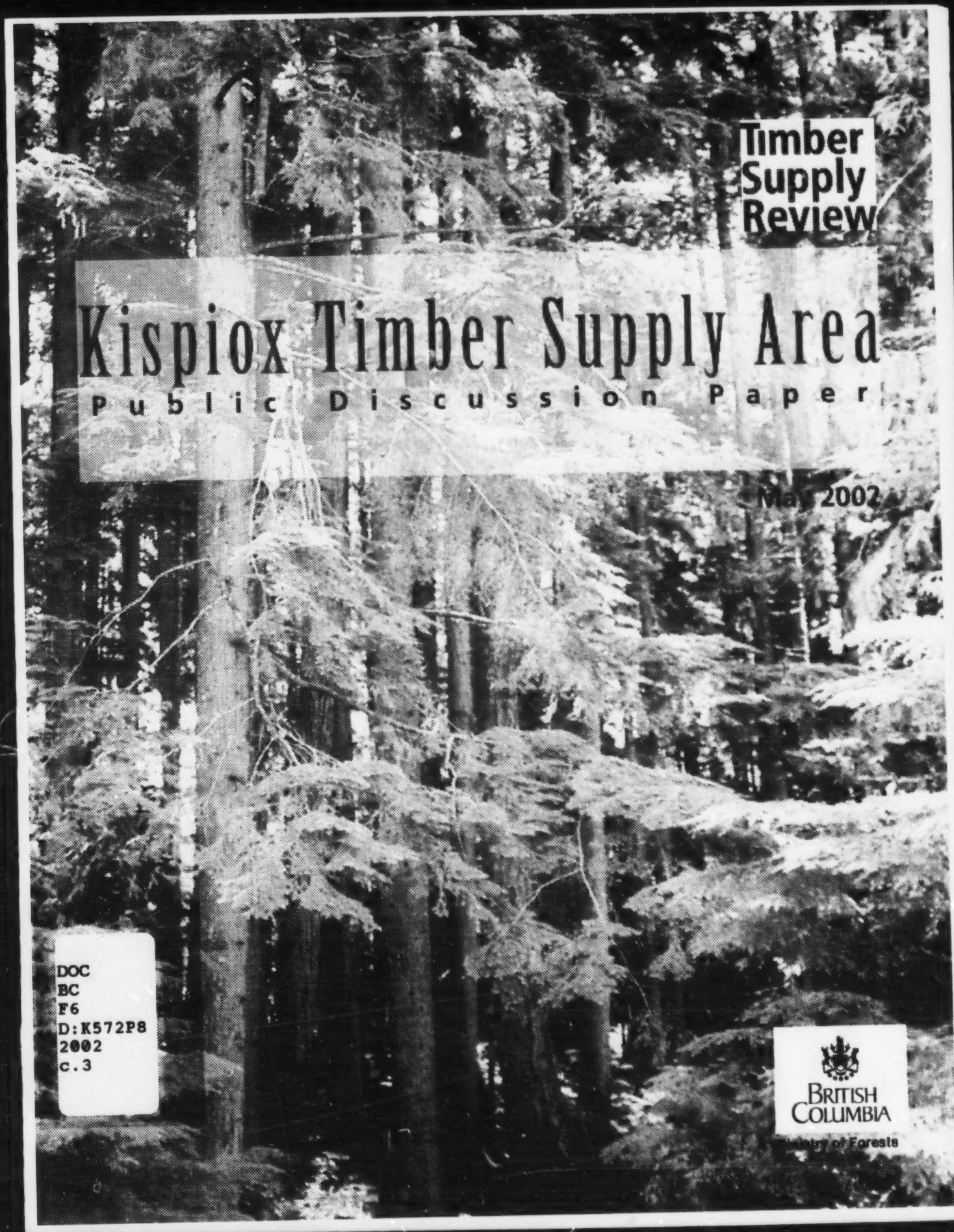

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Introduction

Welcome to the timber supply review in the Kispiox Timber Supply Area. The British Columbia Forest Service reviews the timber supply* for all timber supply areas* (TSAs) and tree farm licences* (TFLs) in the province at least once every five years. This review examines the impacts of current forest management practices on the timber supply, economy, environment and social conditions of the local area and the province. Based on this review, the chief forester will determine the allowable annual cut (AAC) for the Kispiox TSA.

The timber supply review considers:

Economic, environmental and social factors, information about current forest management practices, and public input.

The timber supply review produces:

- A new AAC for the next five years
- A list of the information to be improved for future timber supply forecasts

Timber supply review in the Kispiox TSA

With the release of the *2002 Kispiox TSA Analysis Report*, the British Columbia Forest Service has completed the second step in its timber supply review (see steps below). The *Analysis Report* contains a timber supply analysis with harvest level forecasts and a socio-economic analysis. This discussion paper summarizes the report, provides an overview of the timber supply review process and encourages British Columbians to provide comments during the 45-day public review period. **Public comments will be accepted until June 17, 2002.**

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester's determination will be outlined in a rationale statement that, along with the summary of public input, will be available to the public upon release. Following the release of the chief forester's AAC determination, the minister of forests will apportion the AAC to the various licences and programs.

* **Timber supply** – the amount of timber that is forecast to be available for harvesting over a specified time period, under a particular management regime.

* **TSA** – an integrated resource management unit established in accordance with Section7 of the Forest Act.

* **TFL** – provides rights to harvest timber, and outlines responsibilities for forest management,in a particular area.

* **AAC**– the rate of timber harvest permitted each year from a specified area.

Review Process for the Kispiox TSA

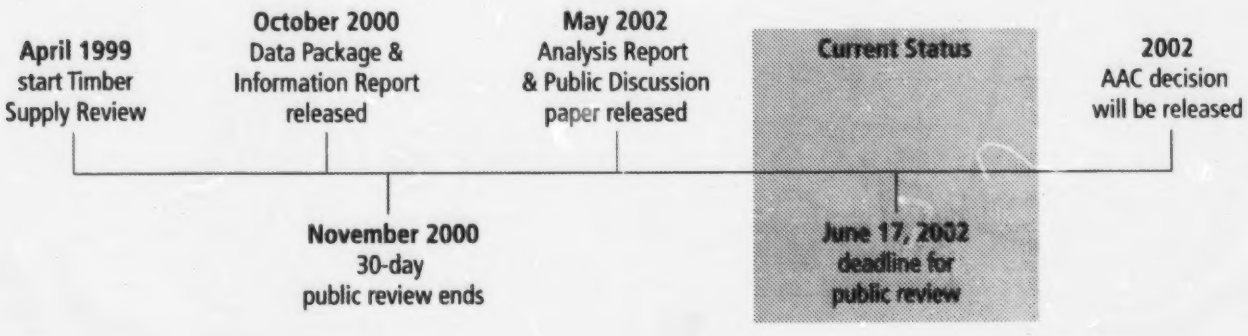

Figure 1. Steps in the timber supply review process for the Kispiox TSA

* **Timber harvesting land base** – Crown forest land within the timber supply area where timber harvesting is considered both acceptable and economically feasible.

Description of the TSA

Located in the north-central Interior, the Kispiox TSA is one of nine TSAs in the Prince Rupert Forest Region. The Kispiox TSA covers about 1.2 million hectares, and is administered by the Kispiox Forest District office in Hazelton.

The District of New Hazelton is the principal commercial, administrative and retail centre for the TSA. Other communities include Hazelton, South Hazelton, Kitwanga, Cedarvale, Kispiox, Gitseguecla, Gitwangak and Gitanyow. The population of the Kispiox TSA was estimated to be about 6,290 in 1996. However, early estimates for the 2001 census project that the population has declined to about 5,995, more than half of whom are First Nations band members.

First Nations

The Gitxsan, Wet'suwet'en, Gitanyow, Nisga'a, Nat'oo'ten and Tsimshian First Nations have traditional lands within the Kispiox TSA. The Gitxsan Nation has five villages (Gitanmaax, Glen Vowell, Kispiox, Gitsegukla and Gitwangak) and the Wet'suwet'en and the Gitanyow have one village each (Hagwilget and Gitanyow, respectively).

The Nisga'a Treaty, finalized in April 2000, includes the Nass Wildlife Area which covers part of the Kispiox TSA. The Gitanyow are currently engaged in accelerated treaty negotiations toward an agreement-in-principle with the province and Canada. The Wet'suwet'en are at the agreement-in-principle stage of the treaty process and, together with the province and Canada, are focused on implementation of a pre-treaty agreement on lands and resources, primarily regarding forestry economic development. The Gitxsan are involved in treaty negotiations working toward an agreement-in-principle with the province and Canada.

All First Nations are interested in increasing their involvement in the forestry sector and in acquiring forest tenure. They have also expressed concerns about timber harvesting in areas with high cultural values. An archaeological overview assessment that identified sites of potential archaeological significance has been completed, and will be considered in the upcoming allowable annual cut determination. Other inventory studies to assess botanical forest products and cultural heritage resources, such as traditional use studies and archaeological impact

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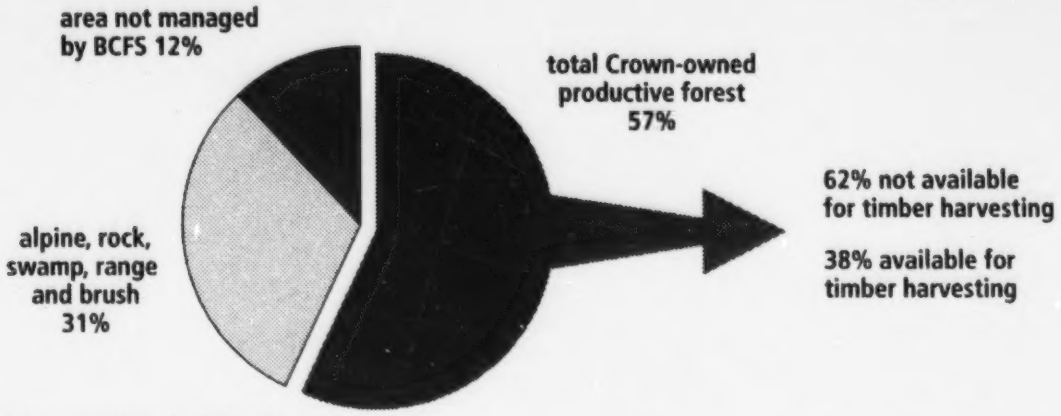

area not managed by BCFS 12%
total Crown-owned productive forest 57%
62% not available for timber harvesting
38% available for timber harvesting
alpine, rock, swamp, range and brush 31%

Figure 2. Breakdown of land base for Kispiox TSA

assessments, are ongoing. Once these studies are completed, they will be considered in future timber supply reviews.

The natural resources

The forests of the Kispiox TSA provide a wide range of forest land resources, including forest products (timber and pine mushrooms), minerals, recreation and tourism amenities, and a variety of fish and wildlife habitats.

The Forest Practices Code outlines a process for identifying species at risk that require special management. Currently, a number of species identified as at risk may be found in the Kispiox TSA, including the northern goshawk, trumpeter swam, fisher, grizzly bear, mountain goat and bull trout.

As Figure 2 shows, about 57 per cent of the Kispiox TSA land base is considered productive Crown forest land managed by the British Columbia Forest Service (approximately 697,000 hectares). Currently, about 38 per cent of this is considered available for harvesting (the timber harvesting land base*).

Environmental values

Current forest management follows the standards set out by the Forest Practices Code. These standards are designed to maintain a range of biodiversity and wildlife values. In the Kispiox TSA, about 62 per cent of the productive Crown-owned forest land is not considered available for timber harvesting and will provide for many environmental values. Forested area both inside and outside the timber harvesting land base will help maintain critical forest habitats for many species. The analysis includes forest cover requirements for biodiversity, scenic areas, community watersheds, protection of environmentally sensitive areas and stream, lake and wetland management.

Land-use planning

The Babine River Local Resource Use Plan and the Kispiox Land and Resource Management Plan (LRMP) are considered in the timber supply analysis. In 1996, key objectives from the LRMP were legally designated in a higher-level plan, including development of special

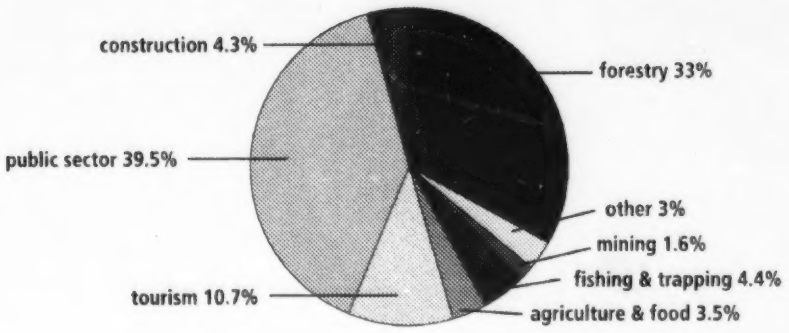


Figure 3. Experienced labour force by sector (1996), Kispiox TSA

management zones to maintain significant values in community watersheds and specified areas. As well, a number of new provincial parks and other protected areas have been designated since the last timber supply review, and are reflected in the timber supply analysis.

Only land-use planning decisions that have received final approval from government will be reflected in this timber supply review.

Current allowable annual cut

Following the last timber supply review, the chief forester set the allowable annual cut (AAC) for the Kispiox TSA at 1,092,611 cubic metres, effective December 1996. This AAC was unchanged from the previous level.

* **Partition** – A portion of the AAC that is attributed to certain types of timber and/or terrain.

Socio-economic profile

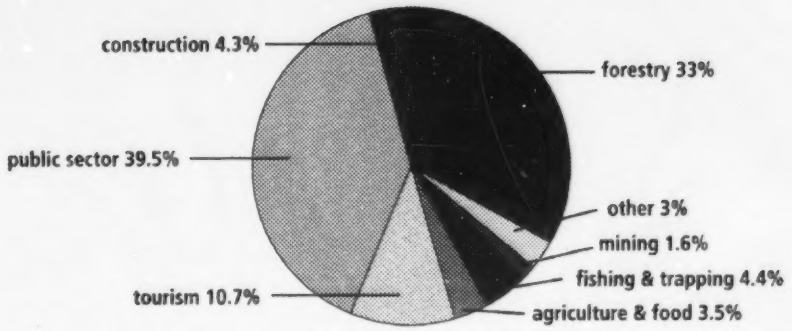
Regional economy

The forest industry in the Kispiox TSA is an important source of employment and income for local residents (see Figure 3). In 1996, the forest sector, including harvesting, silviculture and forest products manufacturing accounted for one-third of the TSA's total employment. However, the forest industry in the Kispiox TSA declined significantly in February 2001 with the indefinite closure of the area's largest sawmill — the Skeena Cellulose Inc. mill at Carnaby — which employed more than 100 people.

The public sector (local and provincial government, health and education) is the largest employer in the Kispiox TSA, accounting for nearly 40 per cent of the total employment. The

Table 1. Local and provincial economic information associated with the 1997-2000 average annual harvest.

Forest industry economic contribution	TSA	Provincial
Direct employment (person years)	497	757
Total employment (person years)	644	1,669
Total employment income ($1999 millions per year)	20.4	49.5
Provincial government revenues ($1999 millions per year)	n.a.	22



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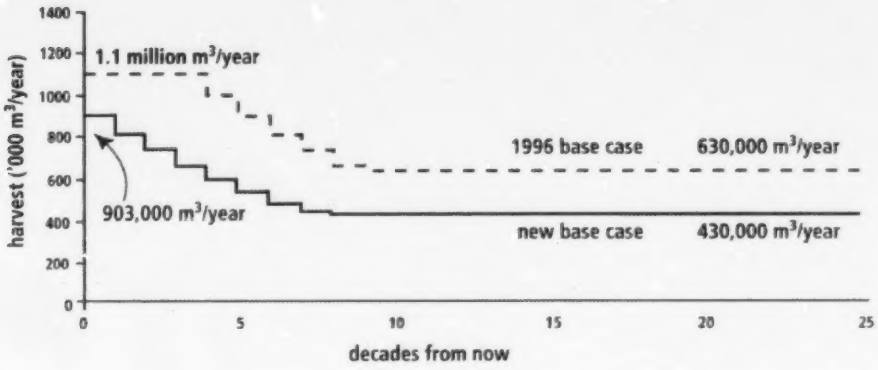

Figure 4. Base case timber supply forecast — Kispiox TSA, 2002

tourism sector, which includes both business and leisure travel, provides about 11 per cent of the total employment.

From 1997 to 2000, an average of nearly 906,000 cubic metres per year was harvested in the Kispiox TSA. In 2001 the TSA harvest volume decreased to 390,000 cubic metres — less than half the average annual harvest level for the previous four years.

Table 1 illustrates the potential contribution of the forest industry associated with the Kispiox TSA timber harvest to both the regional and provincial economies. Figures in this table are based on the 1997-2000 average annual harvest of about 906,000 cubic metres.

The largest tenure holder in the Kispiox TSA is Skeena Cellulose Inc.(SCI). The sale of SCI to NWBC Timber and Pulp Ltd. was ongoing at the time of this publication. The terms of agreement included SCI's replaceable forest licence to harvest 576,815 cubic metres per year in the Kispiox TSA and two processing facilities in the TSA: the Carnaby sawmill and chipping complex and the Hazelton whole log chipper. SCI also owns Kitwanga Lumber Co. Ltd. Kitwanga has three forest licenses to harvest a total of 92,180 cubic metres per year in the Kispiox TSA.

Timber supply forecasts

A timber supply computer model was used to project several possible timber supply forecasts for the next 250 years. The base case forecast illustrates the effect of current forest management practices on timber supply, using the best available information. The base case forecast is not a recommendation for an AAC, but rather it is one of many sources of information the chief forester will consider when setting the AAC.

As Figure 4 shows, the base case forecast for the Kispiox TSA indicates that an initial harvest of 903,000 cubic metres per year can be maintained for 10 years (about 17 per cent lower than the current AAC). After that, the timber supply is projected to decline by about 10 per cent per decade to a steady long-term harvest level of 430,000 cubic metres per year (about 60 per cent lower than the current AAC).

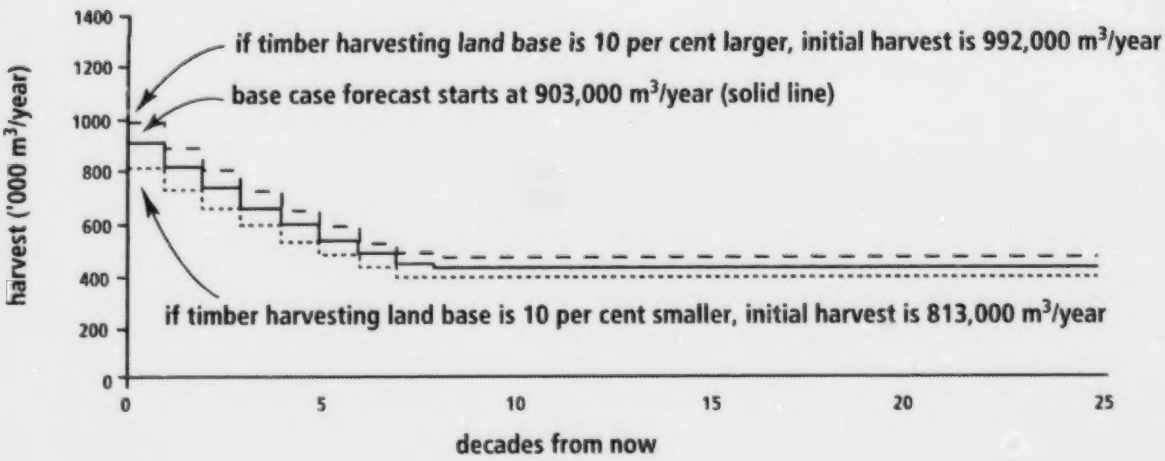

Figure 5. Harvest forecasts showing the effects of uncertainty in the timber harvesting land base—Kispiox TSA, 2002.

Compared to the 1996 timber supply analysis, several changes have occurred in the Kispiox TSA that affect timber supply forecasts. The timber harvesting land base is 17 per cent smaller than in 1996, mostly due to the combined effects of portions of stands left unharvested and six new protected areas. In addition, estimated losses have increased, primarily due to balsam bark beetle and Tomentosus root disease in spruce. Changes in forest management, including requirements for community watersheds, water quality, scenic areas and old-growth forests, have also affected timber availability.

Sensitivity analyses: examining uncertainty

Because forests are complex and constantly changing, timber supply analysts assess how the timber supply might be affected by uncertainties in inventory information and management practices. These uncertainties are generally examined through what are called sensitivity analyses, which the chief forester will consider in determining an AAC. The sensitivity analyses are useful for assessing how uncertainties and risks, or any changes in information, might affect timber supply.

In the Kispiox TSA, a number of sensitivity analyses were conducted to examine the stability of the timber supply in light of uncertainties. Two key sensitivity analyses are described below. For a complete listing of sensitivity analyses, please refer to the *2002 Kispiox TSA Analysis Report*.

Uncertainty about size of the timber harvesting land base

Determining the size of the timber harvesting land base — after reflecting environmental objectives — involves complex considerations and projections about the future. There is no indication the timber harvesting land base in the Kispiox TSA has been over- or underestimated. Nevertheless, there is some uncertainty as a result of factors like reserves for wildlife trees and biodiversity, and the amount of area set aside for streams, lakes and wetlands.

As Figure 5 shows, if the timber harvesting land base is increased by 10 per cent, the initial harvest level increases by approximately

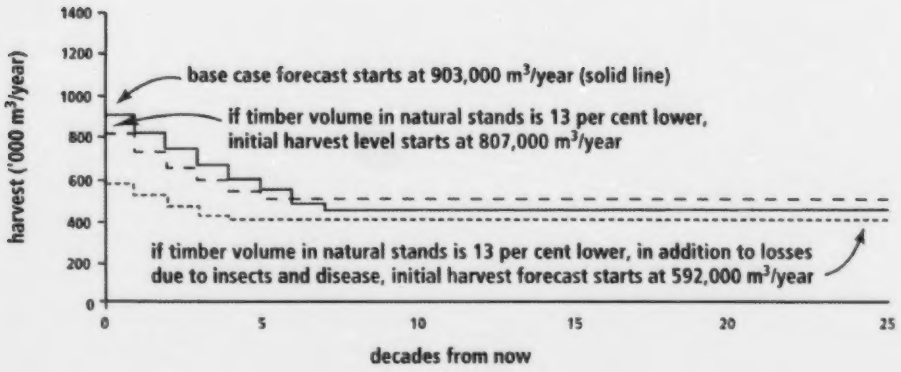

Figure 6. Harvest forecasts showing the effects of changes to volume estimates for existing unmanaged stands—Kispiox TSA, 2002.

10 per cent to 992,000 cubic metres per year. If the timber harvesting land base is reduced by 10 per cent, the initial harvest level decreases by about 10 per cent to 813,000 cubic metres per year.

Uncertainty in timber volume estimates

Timber volume estimates for existing natural stands are subject to uncertainty due to factors like losses due to insects and disease, and inaccuracies in the forest inventory information and the statistical process used to predict forest growth and yield. The results of a 1996 audit in the Kispiox TSA indicate that volumes may be 13 per cent lower than previously estimated.

Since the initial harvest level is almost twice as high as the long-term harvest level, changes in existing stand volumes could have a significant effect on timber supply. As Figure 6 shows, if existing volumes are decreased by 13 per cent, accounting only for losses due to fire and wind, the initial harvest level would be reduced by about 11 per cent. If existing volumes are decreased by 13 per cent, accounting for losses due to insects and disease in addition to fire and wind, the initial harvest level would be reduced by 34 per cent.

Implications of changes in the AAC

Community Implications

The implication of changes in the AAC for local communities is an important consideration in the timber supply review. The forest industry in the Kispiox TSA is a leading source of employment and income for local residents. Compared to the current AAC, an initial harvest forecast of 903,000 cubic metres per year, if fully harvested and processed, would result in a reduction of about 100 direct person years of work in the TSA.

However, the actual 1997-2000 average annual harvest level was about 906,000 cubic metres, or just slightly higher than the initial harvest forecast in the base case. In addition, in 2001, the actual timber harvest decreased to 390,000 cubic metres — or less than half of the initial harvest forecast in the base case. Given the actual harvest rate over the last five years, the impact on the region's economy may not be as significant as projected.

Your input is needed

Public input is a vital part of establishing the AAC. Feedback is welcomed on any aspect of this discussion paper, the *2002 Kispiox TSA Analysis Report* and other issues related to the timber supply in the Kispiox TSA. Forest Service staff would be pleased to answer questions to help you prepare your response. Please send your comments to the forest district manager at the address below. **Your comments will be accepted until June 17, 2002.**

You may identify yourself on the response if you wish. If you do, you are reminded that responses will be subject to the Freedom of Information and Protection of Privacy Act and may be made public. If the responses are made public, personal identifiers will be removed before the responses are released.

A summary of public comments will be attached to the AAC rationale and will be available from the district office when the chief forester's AAC determination is announced.

For more information contact and/or mail your comments to:

District Manager
British Columbia Forest Service
Kispiox Forest District
Bag 5000
Smithers, B.C. V0J 2N0

Phone: 250 842-7600,
Fax: 250 842-7676

Or electronically mail to
Lisa.Hanna@gems8.gov.bc.ca

Visit our Web site at
www.for.gov.bc.ca/tsb

Background Information Regarding TSR

The Chief Forester's Responsibility

Determining the allowable annual cuts (AACs) for public forest lands in British Columbia is the responsibility of the province's chief forester. In this lengthy and complex process, the chief forester considers technical reports, analyses and public input, as well as government's social and economic objectives.

This responsibility is required by legislation in the Forest Act, Section 8. It states that the chief forester shall specifically consider the following factors:

1. The rate of timber production that may be sustained from the area, taking into account:
   - the composition of the forest and its expected rate of growth
   - the time that it will take the forest to become re-established
   - silviculture treatments, including reforestation
   - standards of timber utilization
   - constraints on the amount of timber that may be produced due to use of the forest for other purposes.
2. The short- and long-term implications to the province of alternative rates of timber harvesting from the area.
3. The nature, production capabilities and timber requirements of established and proposed processing facilities.
4. The economic and social objectives of the Crown for the area, region and province—as expressed by the minister of forests.
5. Abnormal insect or disease infestations, and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed – others cannot. Ultimately, the chief forester's determination is an independent professional judgment based on the best available information. By law, the chief forester is independent of the political process, and is not directed by the minister of forests when determining AACs. In these determinations, the chief forester considers relevant information from all sources.